

## **Appendix**

### **Tables A1 through A5 and Figure A1**

**Table A1.** Covariate balancing before matching by category of potential erosion level.

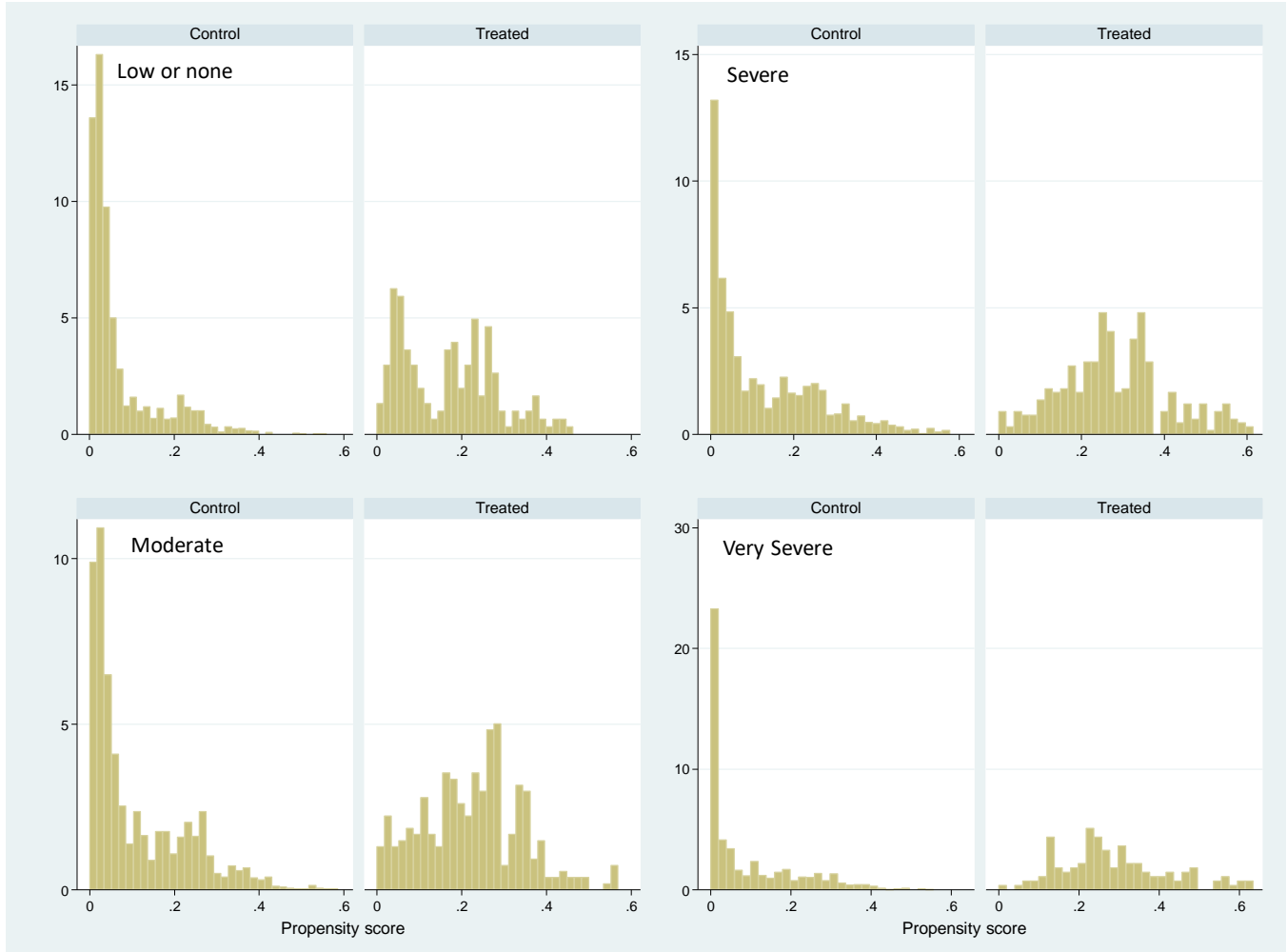
Variables	Low or no erosion			Moderate			Severe			Very severe		
	Treat	Unmatch control	Sig.	Treat	Unmatch control	Sig.	Treat	Unmatch control	Sig.	Treat	Unmatch control	Sig.
<b>Covariates at parcel level</b>												
Initial use shrub and native forest (1)	0.105	0.174	*	0.192	0.278	**	0.291	0.500	***	0.399	0.693	***
Suitable for forestry (land capability classes V to VIII) (1)	0.437	0.284	***	0.705	0.609	**	0.927	0.850	***	0.971	0.947	ns
Growth zone A: Western area of the coastal mountain range (1)	0.105	0.118	ns	0.256	0.184	**	0.510	0.310	***	0.725	0.259	***
Growth zone B: Eastern area of the coastal mountain range (1)	0.484	0.172	***	0.510	0.252	***	0.353	0.146	***	0.217	0.058	***
Growth zone C: Intermediate depression (1)	0.337	0.549	***	0.173	0.342	***	0.078	0.192	***	0.036	0.092	*
Growth zone D: Lower Andean mountain range (1)	0.074	0.158	**	0.058	0.201	***	0.056	0.254	***	0.022	0.278	***
Growth district 6 (downtown area of the Araucanía region) (1)	0.579	0.401	***	0.574	0.424	***	0.535	0.354	***	0.406	0.264	***
Growth district 7 (southern area of the Araucanía region) (1)	0.332	0.555	***	0.353	0.524	***	0.350	0.540	***	0.355	0.537	***
Slope > 30% (1)	0.016	0.004	*	0.016	0.019	ns	0.050	0.071	ns	0.051	0.230	***
Small landowners (1)	0.526	0.470	ns	0.497	0.456	ns	0.599	0.452	***	0.645	0.360	***
Medium and large landowners (1)	0.200	0.243	ns	0.212	0.267	*	0.143	0.305	***	0.123	0.483	***
Forest companies (1)	0.026	0.012	+	0.067	0.057	ns	0.132	0.116	ns	0.181	0.118	*
Distance to urban center (km)	51.325	54.022	ns	55.523	57.692	ns	53.303	59.292	**	52.288	63.558	***
Distance to urban center <sup>2</sup>	3,077.8	3,628.1	*	3,686.4	4,043.1	+	3,618.2	4,426.1	***	3,742.7	5,144.4	**
Distance to pulp mill (km)	113.710	117.720	ns	111.500	124.280	***	115.640	128.480	***	123.040	126.340	ns
Distance to pulp mill <sup>2</sup>	14,773	15,706	ns	13,959	17,662	***	15,324	19,081	***	17,663	19,036	ns
Cautín Conaf office (1)	0.495	0.477	ns	0.327	0.394	*	0.143	0.303	***	0.072	0.335	***
Malleco Conaf office (1)	0.326	0.274	ns	0.391	0.288	***	0.504	0.336	***	0.471	0.368	*
Villarrica Conaf office (1)	0.084	0.128	+	0.115	0.156	+	0.081	0.196	***	0.051	0.208	***
<b>Covariates at landholding level</b>												
Area of the farm (hectare)	150.510	265.640	*	177.280	327.140	***	124.420	575.820	***	122.550	1,251.800	***
Area of the farm <sup>2</sup>	79,419	510,000	*	110,000	660,000	**	57,347	1,500,000	***	52,797	4,000,000	***
Presence of afforestation in the farm (1)	0.474	0.269	***	0.487	0.384	**	0.496	0.436	*	0.507	0.397	*
<b>Covariates at municipality level</b>												
Land afforested at the beginning of the period (%)	0.218	0.127	***	0.239	0.158	***	0.277	0.189	***	0.277	0.172	***
Land afforested at the beginning of the period <sup>2</sup>	0.064	0.029	***	0.070	0.041	***	0.093	0.060	***	0.093	0.055	***
Rural population (person km <sup>2</sup> )	11.097	13.179	*	10.293	11.382	*	8.626	8.946	ns	8.683	7.405	**
Number of violent events (1995 – 2007)	29.858	14.934	***	27.026	18.493	***	19.204	16.898	ns	10.486	14.709	ns
Number of violent events <sup>2</sup>	3,050.0	1,075.0	***	2,560.8	1,453.3	***	1,472.1	1,277.1	ns	804.930	1,156.100	ns
<b>Interactions</b>												
Initial use shrub and native forest × Small landowners	0.058	0.080	ns	0.106	0.118	ns	0.182	0.201	ns	0.304	0.208	*
Initial use shrub and native forest × Medium and large landowners	0.021	0.065	*	0.054	0.097	*	0.053	0.188	***	0.058	0.382	***
Initial use shrub and native forest × Forest companies	-	-	-	0.019	0.031	ns	0.042	0.083	**	0.036	0.087	*
Land afforested at the beginning of the period × Growth zone A	0.018	0.014	ns	0.064	0.029	***	0.146	0.085	***	0.199	0.077	***
Land afforested at the beginning of the period × Growth zone B	0.126	0.405	***	0.133	0.063	***	0.106	0.039	***	0.068	0.013	***
Land afforested at the beginning of the period × Growth zone C	0.054	0.057	ns	0.035	0.047	*	0.018	0.030	**	0.008	0.020	+
Land afforested at the beginning of the period × Growth zone D	-	-	-	0.006	0.018	***	0.007	0.029	***	0.001	0.042	***
Low or no erosion × Area of the farm	150.510	265.640	*	-	-	-	-	-	-	-	-	-
Severe erosion × Area of the farm	-	-	-	-	-	-	124.420	575.820	***	-	-	-
Very severe erosion × Area of the farm	-	-	-	-	-	-	-	-	-	122.550	1,251.800	***
Distance to urban center × Small landowners	26.199	26.619	ns	28.192	27.699	ns	34.118	26.038	***	36.954	19.186	***
Distance to urban center × Medium and large landowners	9.818	13.810	+	10.287	15.529	**	5.991	20.519	***	5.386	37.043	***
Distance to urban center × Forest companies	2.195	0.591	**	4.621	3.186	ns	7.456	5.896	ns	8.215	5.217	+
Distance to pulp mill × Small landowners	55.821	52.778	ns	51.114	55.038	ns	67.921	59.732	+	75.232	48.437	***
Distance to pulp mill × Medium and large landowners	23.783	30.266	ns	24.862	34.638	**	16.915	38.937	***	17.719	60.845	***
Distance to pulp mill × Forest companies	2.039	0.944	ns	7.667	6.319	ns	15.524	14.616	ns	22.815	12.842	**
<b>Number of observations</b>	190	2,889		312	2,080		357	1,785		138	1,132	
<b>Mean bias (%)</b>		23.1			21.7			30.4			47.0	

Note: \*\*\*  $P < 0.001$ ; \*\*  $P < 0.01$ ; \*  $P < 0.05$ ; +  $P < 0.1$ ; ns (no significant)  $P > 0.1$ .

**Table A2.** Estimated coefficients of the treatment models by category of potential erosion level.

Variables	Low or no erosion			Moderate			Severe			Very severe		
	Coef.	Std. Error	Sig.	Coef.	Std. Error	Sig.	Coef.	Std. Error	Sig.	Coef.	Std. Error	Sig.
<b>Covariates at parcel level</b>												
Initial use shrub and native forest (1)	-0.1910	0.2762	ns	-0.6226	0.2083	**	-0.6017	0.1762	**	-1.2322	0.3359	***
Suitable for forestry (land capability classes V to VIII) (1)	0.3817	0.0961	***	0.2199	0.0855	*	0.3542	0.1357	**	-0.0145	0.3635	ns
Growth zone A: Western area of the coastal mountain range (1)	1.7121	0.5533	***	0.4196	0.3622	ns	0.3035	0.3549	ns	0.9472	1.3022	ns
Growth zone B: Eastern area of the coastal mountain range (1)	1.3091	0.3681	***	0.6695	0.3256	*	-0.2012	0.3486	ns	0.1302	1.3031	ns
Growth zone C: Intermediate depression (1)	0.4674	0.2466	+	-0.1670	0.2445	ns	-0.8267	0.3490	*	-0.4993	1.2927	ns
Growth zone D: Lower Andean mountain range (1)	-	-	-	-	-	-	-	-	-	-	-	-
Growth district 6 (downtown area of the Araucanía region) (1)	0.0389	0.4326	ns	0.1167	0.2488	ns	0.7406	0.1876	***	0.7776	0.3322	*
Growth district 7 (southern area of the Araucanía region) (1)	0.0370	0.04326	ns	0.2030	0.2703	ns	0.4710	0.2320	*	0.6793	0.4440	ns
Slope > 30% (1)	0.3562	0.4314	ns	-0.1055	0.2962	ns	0.0797	0.1712	ns	-0.1418	0.2786	ns
Small landowners (1)	-0.0187	0.4810	ns	0.4368	0.4273	ns	1.1099	0.4295	*	1.8112	1.1818	ns
Medium and large landowners (1)	-0.0193	0.5690	ns	-0.2418	0.4985	ns	1.4072	0.5262	**	1.0508	1.2465	ns
Forest companies (1)	-1.7571	1.1329	ns	-0.7397	0.6826	ns	1.5765	0.5530	**	2.2788	1.2621	+
Distance to urban center (km)	-0.0055	0.0125	ns	-0.0013	0.0074	ns	-0.0091	0.0066	ns	-0.0529	0.0252	*
Distance to urban center <sup>2</sup>	< 0.0001	0.0001	ns	< 0.0001	0.0001	ns	0.0001	0.0001	ns	0.0001	0.0001	ns
Distance to pulp mill (km)	0.0213	0.0097	*	0.0124	0.0059	*	0.0022	0.0059	ns	0.0536	0.0181	**
Distance to pulp mill <sup>2</sup>	-0.0001	< 0.0001	*	-0.0001	< 0.0001	**	< -0.0001	< 0.0001	ns	-0.0001	< 0.0001	*
Cautín Conaf office (1)	0.6370	0.4289	ns	0.3904	0.2412	ns	-0.1570	0.2421	ns	-0.9662	0.3506	+
Malleco Conaf office (1)	0.1017	0.4698	ns	0.1101	0.2845	ns	-0.0745	0.2507	ns	-0.3856	0.4961	ns
Villarrica Conaf office (1)	0.5745	0.4052	ns	0.1760	0.2090	ns	-0.3351	0.1942	+	-0.7043	0.4125	+
<b>Covariates at landholding level</b>												
Area of the farm (hectare)	-0.0007	0.0004	+	0.0002	0.0004	ns	-0.0012	0.0004	*	-0.0015	0.0006	**
Area of the farm <sup>2</sup>	< 0.0001	< 0.0001	ns	< -0.0001	< 0.0001	ns	< 0.0001	< 0.0001	ns	< -0.0001	< 0.0001	ns
Presence of afforestation in the farm (1)	0.2309	0.0898	*	0.0343	0.0782	ns	-0.1258	0.0819	ns	0.2141	0.1446	ns
<b>Covariates at municipality level</b>												
Land afforested at the beginning of the period (%)	10.1671	2.3944	***	5.4420	2.0838	**	9.1863	1.7684	***	-17.8867	20.4922	ns
Land afforested at the beginning of the period <sup>2</sup>	-8.6537	3.8011	*	-8.8800	2.5310	***	-13.9177	2.5217	***	4.9978	7.0445	ns
Rural population (person km <sup>-2</sup> )	-0.0645	0.0187	**	-0.0301	0.0136	*	-0.0063	0.0157	ns	-0.0095	0.0268	ns
Number of violent events (1995 – 2007)	-0.0060	0.0044	ns	-0.0073	0.0033	*	-0.0020	0.0046	ns	-0.0160	0.0104	ns
Number of violent events <sup>2</sup>	0.0001	< 0.0001	**	0.0001	< 0.0001	**	< -0.0001	< 0.0001	ns	0.0001	0.0001	*
<b>Interactions</b>												
Initial use shrub and native forest × Small landowners	-0.2091	0.3234	ns	0.4312	0.2418	+	0.2430	0.2030	ns	1.0505	0.3698	**
Initial use shrub and native forest × Medium and large landowners	-0.4090	0.3865	ns	0.4637	0.2707	+	0.1651	0.2584	ns	0.9605	0.4794	*
Initial use shrub and native forest × Forest companies	-	-	-	-	-	-	-	-	-	-	-	-
Land afforested at the beginning of the period × Growth zone A	-7.0303	2.3022	**	1.5708	1.8382	ns	0.0896	1.1463	ns	14.8798	20.7153	ns
Land afforested at the beginning of the period × Growth zone B	-4.6558	1.2781	***	0.0923	1.7564	ns	1.5971	1.2031	ns	18.0910	20.6738	ns
Land afforested at the beginning of the period × Growth zone C	-3.1749	1.0549	**	1.1096	1.6425	ns	2.2876	1.7368	ns	15.3909	20.9487	ns
Land afforested at the beginning of the period × Growth zone D	-	-	-	-	-	-	-	-	-	-	-	-
Distance to urban center × Small landowners	0.0015	0.0056	ns	-0.0064	0.0046	ns	-0.0051	0.0047	ns	0.0443	0.0260	+
Distance to urban center × Medium and large landowners	-0.0011	0.0068	ns	-0.0048	0.0052	ns	-0.0104	0.0057	+	0.0369	0.0262	ns
Distance to urban center × Forest companies	0.0743	0.0259	**	0.0038	0.0073	ns	-0.0098	0.0060	ns	0.0294	0.0264	ns
Distance to pulp mill × Small landowners	0.0017	0.0029	ns	0.0006	0.0026	ns	-0.0042	0.0028	ns	-0.0263	0.0094	**
Distance to pulp mill × Medium and large landowners	0.0038	0.0035	ns	0.0045	0.0030	ns	-0.0028	0.0034	ns	-0.0139	0.0099	ns
Distance to pulp mill × Forest companies	-0.0367	0.0242	ns	0.0065	0.0038	+	-0.0041	0.0034	ns	-0.0193	0.0099	+
Constant	-3.7173	0.9948	***	-2.6940	0.7044	***	-2.7094	0.6580	***	-4.0402	1.9864	*
<b>Number of parcels</b>		3,079			2,389			2,142			1,270	
<b>Treated</b>		187			309			357			122	
<b>Adjusted pseudo R<sup>2</sup></b>		0.195			0.162			0.225			0.391	

Note: \*\*\*  $P < 0.001$ ; \*\*  $P < 0.01$ ; \*  $P < 0.05$ ; +  $P < 0.1$ ; ns (no significant)  $P > 0.1$ .



**Figure A1.** Distribution of propensity score across treatment (afforestation with D.L. 701 program) and control group by category of potential erosion level.

**Table A3.** Additivity estimates of the effect of D.L. 701 subsidies on afforestation by category of potential erosion level. The 95% confidence interval was determined by bootstrapping based on 50 simulations.

Matching method	Afforestation proportion			ATT	Additivity		Unbalanced co-variables (P < 0.05)
	Treated	Matched	Non-matched		95% confidence interval		
<b><u>Low or no erosion</u></b>							
Nearest neighbor	0.4540	0.1085	0.0420	0.3454	0.2402	0.4513	1 to 3
Kernel Epanechnikov bandwidth 0.02	0.4533	0.0761	0.0420	0.3772	0.3094	0.4451	None
Kernel Epanechnikov bandwidth 0.06	0.4540	0.0722	0.0420	0.3818	0.3068	0.4567	None
Kernel Epanechnikov bandwidth 0.1	0.4540	0.0687	0.0420	0.3853	0.3177	0.4528	None
Kernel Epanechnikov bandwidth 0.15	0.4540	0.0639	0.0420	0.3901	0.3185	0.4616	1 to 3
Kernel Gaussian bandwidth 0.02	0.4540	0.0758	0.0420	0.3782	0.2907	0.4656	None
Kernel Gaussian bandwidth 0.06	0.4540	0.0653	0.0420	0.3887	0.3113	0.4661	1 to 3
Kernel Gaussian bandwidth 0.1	0.4540	0.0543	0.0420	0.3996	0.3190	0.4803	> 3
Kernel Gaussian bandwidth 0.15	0.4540	0.0467	0.0420	0.4072	0.3440	0.4705	> 3
Local linear regression bandwidth 0.02	0.4540	0.0786	0.0420	0.3753	0.3084	0.4423	None
Local linear regression bandwidth 0.06	0.4540	0.0763	0.0420	0.3777	0.3056	0.4498	None
Local linear regression bandwidth 0.1	0.4540	0.0764	0.0420	0.3776	0.3100	0.4451	None
Local linear regression bandwidth 0.15	0.4540	0.0771	0.0420	0.3769	0.2963	0.4575	None
Linear regression on match data bandwidth 0.06	-	-	-	0.3695	0.3423	0.3967	-
QMLE Fractional Logit regression on match data bandwidth 0.06	-	-	-	0.3865	0.3583	0.4146	-
QMLE Fractional Probit regression on match data bandwidth 0.06	-	-	-	0.3837	0.3593	0.4080	-
<b><u>Moderate erosion</u></b>							
Nearest neighbor	0.5382	0.1713	0.0993	0.3671	0.2444	0.4891	> 3
Kernel Epanechnikov bandwidth 0.02	0.5378	0.1560	0.0993	0.3818	0.3104	0.4531	None
Kernel Epanechnikov bandwidth 0.06	0.5378	0.1564	0.0993	0.3814	0.3044	0.4584	None
Kernel Epanechnikov bandwidth 0.1	0.5378	0.1510	0.0933	0.3868	0.3237	0.4500	None
Kernel Epanechnikov bandwidth 0.15	0.5378	0.1433	0.0993	0.3945	0.3182	0.4708	None
Kernel Gaussian bandwidth 0.02	0.5378	0.1579	0.0993	0.3799	0.3032	0.4567	None
Kernel Gaussian bandwidth 0.06	0.5378	0.1450	0.0993	0.3928	0.3229	0.4627	None
Kernel Gaussian bandwidth 0.1	0.5378	0.1314	0.0993	0.4064	0.3190	0.4937	> 3
Kernel Gaussian bandwidth 0.15	0.5378	0.1177	0.0993	0.4200	0.3389	0.5012	> 3
Local linear regression bandwidth 0.02	0.5378	0.1586	0.0993	0.3792	0.2962	0.4622	None
Local linear regression bandwidth 0.06	0.5378	0.1575	0.0993	0.3803	0.2978	0.4628	None
Local linear regression bandwidth 0.1	0.5378	0.1547	0.0993	0.3831	0.3059	0.4602	None
Local linear regression bandwidth 0.15	0.5378	0.1537	0.0993	0.3841	0.2864	0.4817	None
Linear regression on match data bandwidth 0.06	-	-	-	0.3666	0.3229	0.4103	-
QMLE Fractional Logit regression on match data bandwidth 0.06	-	-	-	0.3679	0.3501	0.3858	-
QMLE Fractional Probit regression on match data bandwidth 0.06	-	-	-	0.3722	0.3569	0.3876	-
<b><u>Severe erosion</u></b>							
Nearest neighbor	0.5832	0.2642	0.1306	0.3194	0.2041	0.4353	None
Kernel Epanechnikov bandwidth 0.02	0.5832	0.2521	0.1306	0.3310	0.2503	0.4118	None
Kernel Epanechnikov bandwidth 0.06	0.5832	0.2397	0.1306	0.3435	0.2711	0.4159	None
Kernel Epanechnikov bandwidth 0.1	0.5832	0.2341	0.1306	0.3491	0.2822	0.4160	None
Kernel Epanechnikov bandwidth 0.15	0.5832	0.2254	0.1306	0.3578	0.2938	0.4219	1 to 3
Kernel Gaussian bandwidth 0.02	0.5832	0.2428	0.1306	0.3404	0.2452	0.4355	None
Kernel Gaussian bandwidth 0.06	0.5832	0.2281	0.1306	0.3551	0.2879	0.4224	1 to 3
Kernel Gaussian bandwidth 0.1	0.5832	0.2087	0.1306	0.3745	0.3165	0.4325	> 3
Kernel Gaussian bandwidth 0.15	0.5832	0.1831	0.1306	0.4001	0.3364	0.4638	> 3
Local linear regression bandwidth 0.02	0.5832	0.2468	0.1306	0.3364	0.2538	0.4191	None
Local linear regression bandwidth 0.06	0.5832	0.2425	0.1306	0.3407	0.2700	0.4114	1 to 3
Local linear regression bandwidth 0.1	0.5832	0.2481	0.1306	0.3352	0.2569	0.4134	1 to 3
Local linear regression bandwidth 0.15	0.5832	0.2485	0.1306	0.3347	0.2716	0.3978	1 to 3
Linear regression on match data bandwidth 0.06	-	-	-	0.3474	0.3030	0.3918	-
QMLE Fractional Logit regression on match data bandwidth 0.06	-	-	-	0.3687	0.3513	0.3861	-
QMLE Fractional Probit regression on match data bandwidth 0.06	-	-	-	0.3752	0.3600	0.3905	-
<b><u>Very severe erosion</u></b>							
Nearest neighbor	0.6120	0.1192	0.0537	0.4931	0.3652	0.6223	None
Kernel Epanechnikov bandwidth 0.02	0.6122	0.1110	0.0537	0.5011	0.3961	0.6062	None
Kernel Epanechnikov bandwidth 0.06	0.6122	0.1011	0.0537	0.5110	0.3789	0.6432	None
Kernel Epanechnikov bandwidth 0.1	0.6122	0.0986	0.0537	0.5136	0.3807	0.6464	1 to 3
Kernel Epanechnikov bandwidth 0.15	0.6122	0.0941	0.0537	0.5180	0.3815	0.6546	> 3
Kernel Gaussian bandwidth 0.02	0.6122	0.1015	0.0537	0.5107	0.3735	0.6478	None
Kernel Gaussian bandwidth 0.06	0.6122	0.0954	0.0537	0.5168	0.4202	0.6134	1 to 3
Kernel Gaussian bandwidth 0.1	0.6122	0.0886	0.0537	0.5236	0.4103	0.6369	> 3
Kernel Gaussian bandwidth 0.15	0.6122	0.0799	0.0537	0.5323	0.4179	0.6466	> 3
Local linear regression bandwidth 0.02	0.6122	0.1081	0.0537	0.5041	0.3409	0.6673	None
Local linear regression bandwidth 0.06	0.6122	0.1112	0.0537	0.5009	0.3761	0.6258	None
Local linear regression bandwidth 0.1	0.6122	0.1122	0.0537	0.5000	0.3787	0.6212	1 to 3
Local linear regression bandwidth 0.15	0.6122	0.1104	0.0537	0.5017	0.3666	0.6369	1 to 3
Linear regression on match data bandwidth 0.06	-	-	-	0.5098	0.4578	0.5618	-
QMLE Fractional Logit regression on match data bandwidth 0.06	-	-	-	0.5221	0.4816	0.5626	-
QMLE Fractional Probit regression on match data bandwidth 0.06	-	-	-	0.5251	0.4903	0.5600	-

**Table A4.** Covariate balancing after matching.

Variables	Low or no erosion			Moderate			Severe			Very severe		
	Treat	Match control	Sig.	Treat	Match control	Sig.	Treat	Match control	Sig.	Treat	Match control	Sig.
<b>Covariates at parcel level</b>												
Initial use shrub and native forest (1)	0.107	0.116	ns	0.192	0.191	ns	0.296	0.291	ns	0.434	0.455	ns
Suitable for forestry (land capability classes V to VIII) (1)	0.428	0.425	ns	0.701	0.697	ns	0.926	0.923	ns	0.967	0.965	ns
Growth zone A: Western area of the coastal mountain range (1)	0.091	0.091	ns	0.250	0.246	ns	0.519	0.521	ns	0.762	0.752	ns
Growth zone B: Eastern area of the coastal mountain range (1)	0.492	0.469	ns	0.516	0.532	ns	0.342	0.337	ns	0.172	0.166	ns
Growth zone C: Intermediate depression (1)	0.342	0.364	ns	0.175	0.167	ns	0.080	0.078	ns	0.041	0.041	ns
Growth zone D: Lower Andean mountain range (1)	0.075	0.076	ns	0.058	0.053	ns	0.057	0.057	ns	0.025	0.027	ns
Growth district 6 (downtown area of the Araucanía region) (1)	0.588	0.581	ns	0.578	0.566	ns	0.527	0.507	ns	0.336	0.325	ns
Growth district 7 (southern area of the Araucanía region) (1)	0.321	0.335	ns	0.357	0.369	ns	0.356	0.372	ns	0.393	0.399	ns
Slope > 30% (1)	0.011	0.011	ns	0.016	0.014	ns	0.051	0.049	ns	0.057	0.057	ns
Small landowners (1)	0.535	0.523	ns	0.493	0.478	ns	0.601	0.590	ns	0.697	0.663	ns
Medium and large landowners (1)	0.203	0.209	ns	0.211	0.218	ns	0.145	0.140	ns	0.131	0.143	ns
Forest companies (1)	0.011	0.011	ns	0.068	0.067	ns	0.125	0.136	ns	0.139	0.156	ns
Distance to urban center (km)	50.512	51.305	ns	55.930	56.870	ns	53.943	54.133	ns	55.401	55.189	ns
Distance to urban center <sup>2</sup>	2,960.3	3,072.0	ns	3,724.3	3,845.9	ns	3,671.5	3,743.2	ns	4,035.9	4,031.7	ns
Distance to pulp mill (km)	114.080	113.920	ns	111.540	112.050	ns	116.200	115.390	ns	120.510	120.220	ns
Distance to pulp mill <sup>2</sup>	14,879	14,836	ns	13,959	14,112	ns	15,465.0	15,306.0	ns	16,730	16,754	ns
Cautín Conaf office (1)	0.503	0.498	ns	0.328	0.338	ns	0.145	0.145	ns	0.074	0.079	ns
Malleco Conaf office (1)	0.332	0.331	ns	0.386	0.373	ns	0.496	0.486	ns	0.467	0.464	ns
Villarrica Conaf office (1)	0.086	0.091	ns	0.117	0.117	ns	0.083	0.092	ns	0.057	0.065	ns
<b>Covariates at landholding level</b>												
Area of the farm (hectare)	152.380	172.100	ns	175.300	192.270	ns	124.880	145.310	ns	130.070	182.580	ns
Area of the farm <sup>2</sup>	80,667	150,000	ns	110,000	170,000	ns	58,139	130,000	ns	58,898	230,000	ns
Presence of afforestation in the farm (1)	0.481	0.456	ns	0.490	0.482	ns	0.490	0.499	ns	0.492	0.525	ns
<b>Covariates at municipality level</b>												
Land afforested at the beginning of the period (%)	0.217	0.210	ns	0.238	0.235	ns	0.275	0.275	ns	0.269	0.271	ns
Land afforested at the beginning of the period <sup>2</sup>	0.064	0.061	ns	0.069	0.067	ns	0.092	0.092	ns	0.086	0.089	ns
Rural population (person km <sup>-2</sup> )	11.143	11.590	ns	10.340	10.618	ns	8.696	8.686	ns	8.702	8.687	ns
Number of violent events (1995 – 2007)	30.337	29.353	ns	27.331	27.643	ns	19.464	18.958	ns	10.697	10.748	ns
Number of violent events <sup>2</sup>	3,099.0	2,946.1	ns	2,593.7	2,615.8	ns	1,496.7	1,462.6	ns	887.940	837.170	ns
<b>Interactions</b>												
Initial use shrub and native forest × Small landowners	0.059	0.064	ns	0.107	0.106	ns	0.185	0.181	ns	0.328	0.319	ns
Initial use shrub and native forest × Medium and large landowners	0.021	0.026	ns	0.052	0.054	ns	0.054	0.055	ns	0.066	0.081	ns
Initial use shrub and native forest × Forest companies	-	-	-	0.019	0.018	ns	0.042	0.044	ns	0.041	0.054	ns
Land afforested at the beginning of the period × Growth zone A	0.015	0.014	ns	0.062	0.057	ns	0.149	0.150	ns	0.214	0.213	ns
Land afforested at the beginning of the period × Growth zone B	0.128	0.121	ns	0.135	0.138	ns	0.101	0.100	ns	0.044	0.045	ns
Land afforested at the beginning of the period × Growth zone C	0.055	0.056	ns	0.036	0.033	ns	0.018	0.018	ns	0.010	0.009	ns
Land afforested at the beginning of the period × Growth zone D	-	-	-	0.006	0.006	ns	0.007	0.007	ns	0.001	0.003	ns
Low or no erosion × Area of the farm	152.380	172.100	ns	-	-	-	-	-	-	-	-	-
Severe erosion × Area of the farm	-	-	-	-	-	-	124.880	145.310	ns	-	-	-
Very severe erosion × Area of the farm	-	-	-	-	-	-	-	-	-	130.070	182.580	ns
Distance to urban center × Small landowners	26.619	26.658	ns	28.352	27.886	ns	34.701	33.765	ns	41.801	38.899	ns
Distance to urban center × Medium and large landowners	9.975	10.598	ns	10.315	11.265	ns	6.094	6.399	ns	5.631	7.029	ns
Distance to urban center × Forest companies	0.594	0.592	ns	4.681	4.615	ns	7.313	8.027	ns	6.930	8.115	ns
Distance to pulp mill × Small landowners	56.717	55.444	ns	50.862	49.543	ns	68.492	66.689	ns	82.736	77.788	ns
Distance to pulp mill × Medium and large landowners	24.165	24.612	ns	24.695	25.792	ns	17.204	17.297	ns	18.343	19.690	ns
Distance to pulp mill × Forest companies	0.620	0.650	ns	7.767	7.163	ns	14.963	15.670	ns	16.176	18.420	ns
<b>Number of observations</b>	187	2,889		308	2,080		351	1,785		122	1,132	
<b>Mean bias (%)</b>		2.3			1.9			1.4			2.7	

Note: ns (no significant)  $P > 0.1$ .

**Table A5.** Additionality estimates using “trimming” to impose common support.

Type of potential erosion	Number of parcels	Adoption rate			$\widehat{ATT}$	Additionality		%ATT
		Treated	Matched	Non-matched		95% confidence interval		
<b>Group: all parcels</b>								
Low or no erosion	3,041	0.4518	0.0592	0.0420	0.3926 (0.041)	0.3091	0.4760	86.9
Moderate	2,330	0.5327	0.1331	0.0993	0.3996 (0.041)	0.3124	0.4868	75.0
Severe	2,071	0.5478	0.1883	0.1306	0.3597 (0.035)	0.2805	0.4390	65.7
Very severe	1,243	0.6197	0.0836	0.0537	0.5360 (0.054)	0.4204	0.6516	86.5
<b>Group: parcels with presence of afforestation in the farm at the beginning of the evaluation period</b>								
Low or no erosion	848	0.5379	0.0964	0.0696	0.4415 (0.067)	0.2912	0.5918	82.1
Moderate	921	0.4682	0.1931	0.1228	0.2751 (0.051)	0.1504	0.3998	58.8
Severe	921	0.5674	0.2896	0.1625	0.2778 (0.049)	0.1504	0.4053	49.0
Very severe	505	0.6483	0.0743	0.0599	0.5741 (0.078)	0.4171	0.7311	88.6

Notes: the 95 % confidence interval was determined by bootstrapping based on 500 simulations.  $\widehat{ATT}$  = Estimated Average Treatment effect on the Treated and standard error in parentheses. The additionality was calculated by trimming for a level of 20 percent of the sample.